UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,819	08/22/2001	Shoichi Kamano	032865-012	7236

7590 06/16/2004	EXAMINER
William C. Rowland	MEONSKE, TONIA L

ART UNIT	PAPER NUMBER
2183	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/933,819	KAMANO ET AL.
	Examiner	Art Unit	
	Tonia L Meonske	2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *14 March 2003*.

2a) ☐ This action is **FINAL**.　　　　2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-13* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-13* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *22 August 2001* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☐ All　b) ☐ Some * c) ☒ None of:

　　　1. ☒ Certified copies of the priority documents have been received.

　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date *3/14/03, 10/7/02,* .

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☒ Other: *IDS field on 4/4/02.*

DETAILED ACTION

Information Disclosure Statement

1.　　　Regarding the IDS filed on April 4, 2002, the IDS filed on October 7, 2002, and the IDS

filed on March 14, 2003, the examiner has not considered the non-patent literature documents

(namely the copending U.S. Patent Applications) because they have not been identified properly.

According to 37 CFR 1.98(b)(3), each U.S. Patent Application must be identified by inventor,

application number, and filing date. Applicant has only provided the application number and in

some cases the title. Therefore, these documents are not being considered.

Priority

2.　　　Acknowledgment is made of applicant's claim for foreign priority based on an application

filed in the Japanese Patent Office on August 29, 2000. It is noted, however, that applicant may

not have filed a certified copy of the 2000-259816 application as required by 35 U.S.C. 119(b) as

the copy of the scanned image does not have a copy of a ribbon. Appropriate correction is

required.

Drawings

3.　　　The drawings are objected to because of the following minor informalities: In Fig.1,

Fig.2, and Fig. 11, component 15 should be changed to read "Data Path Portion" as disclosed in

the specification on page 9, line 9, or all occurrences of "data path portion" in the specification

should be changed to say "Data Pass Portion." Also, in Fig.1, Fig. 2, and Fig. 11, component 6

should be drawn more clearly (where the F's don't overlap lines). And, should component 6 be

fully within component 8? A proposed drawing correction or corrected drawings are required in

reply to the Office action to avoid abandonment of the application. The objection to the

drawings will not be held in abeyance.

Specification

4.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

5.   The applicant or their representatives are urged to review the specification and submit

corrections for all mistakes of a grammatical, clerical, or typographical nature.

6.   Appropriate correction is required.

Claim Rejections - 35 USC § 101

7.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8.   Claims 11, 12, and 13 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. Claim 11 recites a program product per se because the

program product is not claimed as being executed on a computer. Please change the beginning

of the preamble of claim 11 to read "A computer program product within a computer-readable

medium executed on a computer for controlling a data processing system, the program product

has…". Appropriate correction is required.

Claim Rejections - 35 USC § 112

9.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10.   Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11.   Claim 1 recites the limitation "the processing procedure preset in the sequence control portion" in lines 13 and 14. There is insufficient antecedent basis for this limitation in the claim.

12.   Claim 8 recites the limitation "the processing procedure preset in the sequence control portion" in lines 30 and 31. There is insufficient antecedent basis for this limitation in the claim.

13.   Claim 11, recites the limitation "wherein, as the general-purpose instructions, a priority instruction..." in lines 30 and 31. It is unclear why the limitation ", as the general-purpose instructions," appears in the claims, because the limitation with respect to the rest of the claim, is nonsensical.

14.   Claims 2-7, 9, 10, and 12-13 are rejected for incorporating the defects of their respective independent claims 1, 8, and 11.

15.   Appropriate correction is required.

Claim Rejections - 35 USC § 102

16.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17.   Claims 1-13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Beacom et al., US Patent 5,093,908 (herein after referred to as "Beacom").

18.   Referring to claim 1, Beacom has taught a data processing system comprising:

a.   at least one special purpose data processing unit for executing a series of

predetermined data processes by a special purpose instruction (Figure 1, element 120);

and

b.   a general purpose data processing unit for executing processes designated by

general purpose instructions (Figure 1, element 110),

c.   wherein the special purpose data processing unit has a dedicated circuit portion

specialized in specific data processes (Figure 1, element 120, column 2, lines 60-column

3, line 22, The dedicated circuit processes floating point instructions.) and a sequence

control portion that supplies the dedicated circuit portion with control signals to control

the dedicated circuit portion in accordance with a predetermined processing procedure

(Figure 3, element 301), and

d.   wherein the general purpose data processing unit is able to control the dedicated

circuit portion in accordance with a procedure different from the processing procedure

preset in the sequence control portion (Figure 1, element 111, Figure 3, elements 111,

360, 302, 303, and 112, column 8, line 62-column 9, line 37. Element 111 from the

general purpose data processing unit controls the dedicated circuit by indicating an

exception condition, and in response to this exception condition, a hold signal is

generated such that the dedicated circuit is prevented from proceeding until the hold

signal is released.).

19.   Referring to claim 2, Beacom has taught a data processing system according to claim 1,

as described above, and

a.   wherein the general purpose data processing unit is able to supply the dedicated

circuit portion with control signals superseding the control signals supplied from the

sequence control portion (Figure 3, element 111), and

b.   wherein the special purpose data processing unit has a selection means for

supplying the dedicated circuit portion with selected control signals among the control

signals supplied from the sequence control portion and the control signals supplied from

the general purpose data processing unit (Figure 3, element 302).

20.   Referring to claim 3, Beacom has taught a data processing system according to claim 1,

as described above, and

a.   wherein the general purpose data processing unit is able to change the processing

procedure set in the sequence control portion (Figure 3, Element 111, is able to change

the processing procedure set in the sequence control portion by causing the hold signal to

be asserted.).

21.   Referring to claim 4, Beacom has taught a data processing system according to claim 1,as

described above, and further comprising:

a.   a fetch unit for fetching the special purpose instruction and the general purpose

instructions from a recording means where a program having the special purpose

instruction and the general purpose instructions are recorded and for supplying the special

purpose data processing unit with the special purpose instruction (column 8, lines 60-62,

column 3, line 47-column 4, line 36).

22.   Referring to claim 5, Beacom has taught a data processing system according to claim 4,

as described above, and

a.   wherein the general purpose data processing unit is able to supply the dedicated

circuit portion with control signals superseding the control signals supplied from the

sequence control portion based on at least one of the general purpose instructions (Figure

3, element 111, column 6, lines 9-65), and

b.   wherein the special purpose data processing unit has a selection means for

supplying the dedicated circuit portion with selected control signals among the control

signals supplied from the sequence control portion and the control signals supplied from

the general purpose data processing unit (Figure 3, element 302).

23.   Referring to claim 6, Beacom has taught a data processing system according to claim 5,

as described above, and wherein the selection means is controlled by the general purpose data

processing unit (Figure 3, element 360 is controlled by element 11, which is from the general

purpose data processing unit.).

24.   Referring to claim 7, Beacom has taught a data processing system according to claim 4,

as described above, and wherein the general purpose data processing unit changes the processing

procedure set in the sequence control portion according to at least one of the general purpose

instructions (Figure 3, element 111, column 6, lines 9-65).

25.   Referring to claim 8, Beacom has taught a control method of a data processing system

comprising at least one special data processing unit for executing a series of predetermined data

processes by a special purpose instruction (Figure 1, element 120) and a general purpose data

processing unit for executing processes designated by general purpose instructions (Figure 1,

element 110), wherein the special purpose data processing unit has a dedicated circuit portion

specialized in specific data processings (Figure 1, element 120, column 2, lines 60-column 3, line

22, The dedicated circuit processes floating point instructions.) and a sequence control portion that supplies the dedicated circuit portion with control signals to control the dedicated circuit portion in accordance with a predetermined processing procedure (Figure 3, element 301), comprising:

> a.   a first step of supplying the dedicated circuit portion with a series of the control signals by the special purpose instruction in accordance with the processing procedure preset in the sequence control portion and controlling the dedicated circuit portion (column 9, lines 18-21); and

> b.   a second step of controlling the dedicated circuit portion by at least one of the general purpose instructions in accordance with a procedure different from the processing procedure preset in the sequence control portion (Figure 1, element 111, Figure 3, elements 111, 360, 302, 303, and 112, column 8, line 62-column 9, line 37. Element 111 from the general purpose data processing unit controls the dedicated circuit by indicating an exception condition, and in response to this exception condition, a hold signal is generated such that the dedicated circuit is prevented from proceeding until the hold signal is released.).

26.   Referring to claim 9, Beacom has taught a control method according to claim 8, as described above, and wherein, in the second step, control signals superseding the control signals of the sequence control portion are supplied to the dedicated circuit portion based on at least one of the general purpose instructions (Figure 3, element 111).

27.   Referring to claim 10, Beacom has taught a control method according to claim 8, as described above, and wherein, in the second step, the processing procedure preset in the

sequence control portion is changed (Figure 1, element 111, Figure 3, elements 111, 360, 302, 303, and 112, column 8, line 62-column 9, line 37. Element 111 from the general purpose data processing unit controls the dedicated circuit by indicating an exception condition, and in response to this exception condition, a hold signal is generated such that the dedicated circuit is prevented from proceeding until the hold signal is released.).

28.   Referring to claim 11, Beacom has taught a program product for controlling a data processing system, the program product has general purpose instructions for a general purpose data processing unit (Figure 1, element 110, column 2, lines 61-67) and a special purpose instruction for a special purpose data processing unit comprising a dedicated circuit portion specialized in specific data processings (Figure 1, element 120, column 2, lines 61-67) and a sequence control portion that supplies the dedicated circuit portion with control signals to control the dedicated circuit portion in accordance with a predetermined processing procedure (Figure 3, element 301),

> a.   wherein the special purpose instruction is an instruction to supply the dedicated circuit portion with control signals in accordance with a preset processing procedure in the sequence control portion and to control the dedicated circuit portion (Figure 3, element 301), and
>
> b.   wherein, as the general-purpose instructions, a priority instruction to control the dedicated circuit portion in accordance with a procedure different from the processing procedure preset in the sequence control portion is provided (Figure 1, element 111, Figure 3, elements 111, 360, 302, 303, and 112, column 8, line 62-column 9, line 37. Element 111 from the general purpose data processing unit controls the dedicated circuit

by indicating an exception condition, and in response to this exception condition, a hold

signal is generated such that the dedicated circuit is prevented from proceeding until the

hold signal is released.).

29.   Referring to claim 12, Beacom has taught a program product according to claim 11, as

described above, and wherein the priority instruction is an instruction that is converted into

control signal superseding the control signals supplied from the sequence control portion and that

is then supplied to the dedicated circuit portion (Figure 3, The possible excepting instruction is

converted into the control signal element 11. In response to this exception condition control

signal, a hold signal is generated such that the dedicated circuit is prevented from proceeding

until the hold signal is released.).

30.   Referring to claim 13, Beacom has taught a program product according to claim 11, as

described above, and wherein the priority instruction is an instruction to change the processing

procedure preset in the sequence control portion (Figure 3, The possible excepting instruction is

converted into the control signal element 11. In response to this exception condition control

signal, a hold signal is generated such that the dedicated circuit is prevented from proceeding

until the hold signal is released.).

Conclusion

31.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tonia L Meonske whose telephone number is (703) 305-3993.

The examiner can normally be reached on Monday-Friday, 8-4:30.

32.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Eddie P Chan can be reached on (703) 305-9712. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

33.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tlm

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